

REMARKS

The Non Final Office Action mailed September 29, 2009 has been reviewed and carefully considered. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claims 1-9, 20, 22-23 and 30-34 are pending in this application. Claim 1 has been amended. No new matter has been added.

DRAWINGS:

Fig. 1 was objected to as lacking drawing labels. In response, Applicant has amended FIG. 1 to include the pertinent drawing labels as supported by the specification. Amended FIG. 1, labeled "Replacement Sheet" is attached herewith. Withdrawal of the objection is respectfully requested.

§112 REJECTIONS

Claims 1-9, 20, 22-23 and 30-34 were rejected under 35 U.S.C. 112, first paragraph. Namely, independent claims 1, 7 and 30 recite "a first set and a second set of bandwidths..." which is alleged as comprising limitations not supported by the specification. Applicant respectfully disagrees.

The first and second sets of bandwidths refers to the two sets of bandwidths supported by the modem 1. As described in the specification, e.g., paragraphs [0053 – 0055], the terms "MAXUSB" and "MAXDSL" refer to bandwidths from the two sets of bandwidths supported by the modem. MAXUSB and MAXDSL (i.e., a USB bandwidth and a DSL bandwidth, respectively) are stated as matching each other. Thus, the claim

language reciting “a DSL bandwidth selected from a first set of bandwidths” and “a local bus bandwidth selected from a second set of bandwidths so as to match the DSL bandwidth” is duly supported by the specification as filed. Withdrawal of this 112 rejection is respectfully requested.

Paragraph [0055] recites:

“MAXUSB and MAXDSL are bandwidths from the two sets of bandwidths supported by the modem. MAXUSB and MAXDSL match each other; i.e., they have identical payload data rates, or MAXUSB is the lowest supported bandwidth on the USB bus 4 that has a higher payload data rate than MAXDSL. MAXDSL is at least equal to a minimum bandwidth to which the DSL line 3 can be synchronized.”

Claim 1 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 1 was amended to correct an inadvertent typographical error (to replace the term “second” with “first” in the last sentence as shown) and further, to delete a superfluous comma. Thus, the ‘if’ condition applies to the last selection process of the claim: “to select the first data transfer mode if said local bus bandwidth is above said threshold and if said second data transfer mode cannot be used with said local bus bandwidth.” Note that this step conforms to step (c) of Claim 7. Withdrawal of this 112 rejection is respectfully requested.

§103 REJECTIONS:

Claims 1-9, 20, 22 and 23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Day et al. (U.S. Patent No. 6,658,499, hereinafter “Day”) in view of U.S. Patent No. 7,230,975 to Subrahmanya et al. (hereinafter Subrahmanya).

Claims 30-34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Day et al. (U.S. Patent No. 6,658,499, hereinafter "Day") in view of U.S. Patent No. 7,230,975 to Subrahmanya et al. (hereinafter Subrahmanya) and further in view of U.S. Patent No. 6,157,975 to Brief et al. (hereinafter Brief).

Applicant respectfully disagrees with the rejections.

Day involves a system and method for ADSL USB bandwidth negotiation in which a modem is provided that, *inter alia*, can modify the USB bus transfer mode in response to the availability of isochronous bandwidth. Indeed, Col. 8, lines 3-10 recites:

"Circuitry /means 406 is configured to modify the USB bus transfer mode of the modem 400 in response to the amount of bandwidth that is determined to be available on the USB bus by the circuitry/means 406. In this regard, the circuitry/means 406 may, for example, modify the USB bus transfer mode of the modem 400 **from isochronous to bulk based on the determination that no isochronous bandwidth is available.**"

[emphasis added]

As shown in FIG. 6, while Day does arguably disclose selection between bulk and isochronous transfer modes depending on the bandwidth required, Day predominantly employs isochronous USB transfer modes, and in particular, in Day it is explicitly stated that the bulk transfer mode is switched to ONLY when it is determined that the isochronous transfer mode is NOT available. This is recited in Col. 8 above as well as in steps 612 and 616 of FIG. 6, and in Col. 13, lines 1-6.

Thus, Day fails to disclose or suggest at least a modem adapted to select a first data transfer more (i.e., a bulk transfer mode) if said local bus bandwidth is below a specified nonzero threshold even if said second data transfer mode (i.e., an isochronous transfer mode) could be used with said local bus bandwidth, essentially as claimed in claims 1 and 7.

Subrahmanya fails to cure the deficiencies of Day. Subrahmanya involves wireless communications systems such as CDMA or TDMA and in particular, to a method for providing improved estimates of the time-varying response of a communication channel from a received pilot in a wireless communication system. In particular, techniques are disclosed to process a signal received under certain channel conditions to provide pilot symbols, and to filter the pilot symbols in an 'adaptive' manner to provide an improved estimate of the response of the communication channel via which the signal was received. Thus, Subrahmanya relates to various adaptive pilot filtering schemes to ultimately determine the characteristics of the response of a communication channel between a transmitter and a receiver.

However, Subrahmanya has nothing to do with USB or DSL, or with choosing a data transfer mode (bulk or isochronous) for a modem. Thus, one of ordinary skill in the art would not combine such a reference such as Subrahmanya which is unrelated to USB and DSL with Day.

Moreover, even assuming *arguendo* that they could be combined, the combination falls short of the claims. Indeed, Subrahmanya is silent with respect to determining a data transfer mode for a modem interconnecting a DSL line and a local bus, and fails to disclose or suggest at least a modem adapted to select a first data transfer mode if a local bus bandwidth is below a specified nonzero threshold even if a second data transfer mode could be used with said local bus bandwidth, essentially as claimed in claims 1 and 7.

With respect to claim 30, the Examiner acknowledges that Day fails to teach the selection of a first data transfer mode being independent of a local bus bandwidth. The

Examiner cites Brief as allegedly disclosing a selection of a first data transfer mode being independent of the local bus bandwidth. Applicant respectfully disagrees.

Brief provides a programming interface to a USB device which includes a programming model consisting of a number of endpoint pipes, each of which can be configured to provide one of several functions. With regards to any alleged disclosure of the selection of a data transfer mode, Brief merely generally mentions wherein each of its plurality of endpoint pipes is configurable to operate in a control, bulk, interrupt and X isochronous mode. It goes on to simply mention wherein a buffer address may contain bits such as Type Isochronous Bit TI to indicate whether the endpoint pipe is isochronous – that is, when TI is in a one state, the data is isochronous, and when TI is in a zero state, the endpoint pipe may be a bulk, control or interrupt endpoint pipe.

However, the discussion of wherein a plurality of endpoint pipes may be configurable to operate in various modes, does not amount to a disclosure or suggestion of selecting a first data transfer mode (i.e., bulk transfer), said selection of the first data transfer mode being independent of the local bus bandwidth. Indeed, Brief fails to cure the deficiencies of Day and/or Subrahmanya and namely, fails to disclose or suggest at least selecting a first data transfer mode (i.e., bulk transfer), said selection of the first data transfer mode being independent of the local bus bandwidth, essentially as claimed in claim 30.

Accordingly, claims 1, 7 and 30 are asserted to be patentable and nonobvious over Day, Subrahmanya and/or Brief, either individually or in any combination, for at least the reasons stated above. Claims 2-6, 8-9, 20, 22-23 and 31-34 depend from claims 1, 7 and 30. The dependent claims include the limitations of their respective independent claims

and are therefore believed to be patentable and nonobvious for at least the reasons stated for claims 1, 7 and 30.

Accordingly, withdrawal of all the rejections and early and favorable reconsideration of this application is respectfully requested.

CONCLUSION

In view of the foregoing, Applicant respectfully requests that the rejections of the claims set forth in the Non Final Office Action of September 29, 2009 be withdrawn, that pending Claims 1-9, 20, 22-23 and 30-34 be allowed, and that the case proceed to early issuance of Letters patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's representatives Deposit Account No. 07-0832.

Respectfully submitted,

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